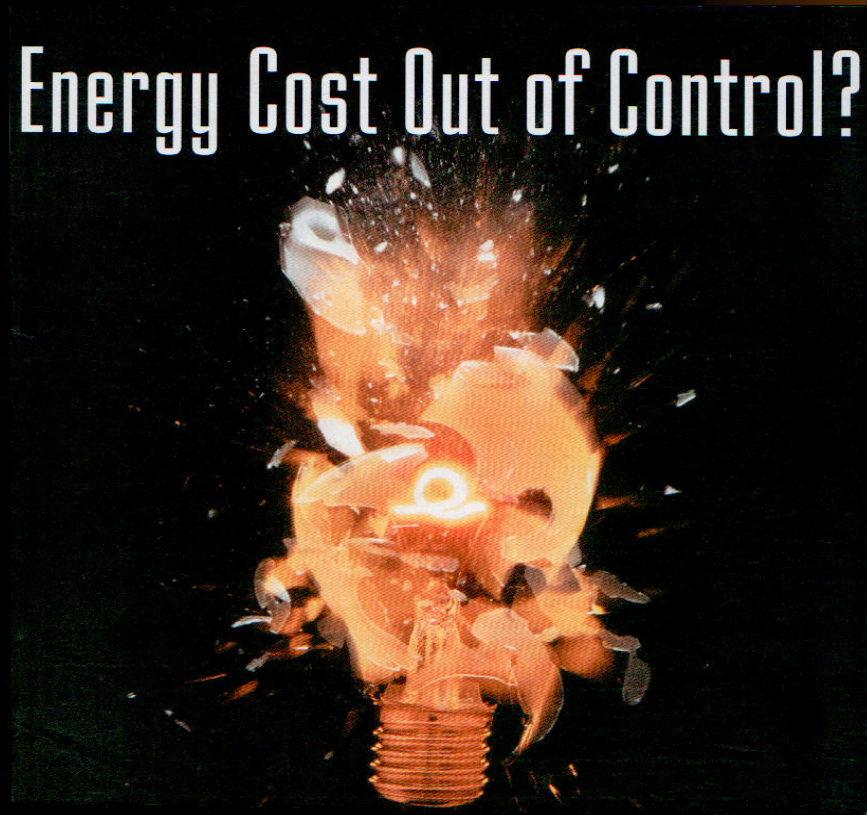


The Department of Human Services Energy Management Program

Energy Cost Out of Control?



The DHS Energy Office Commitment



- To efficiently and economically manage DHS utility resources without compromising the environment, productivity or health compliance standards of our health institutions.

We effectively manage DHS utilities to produce positive financial results !

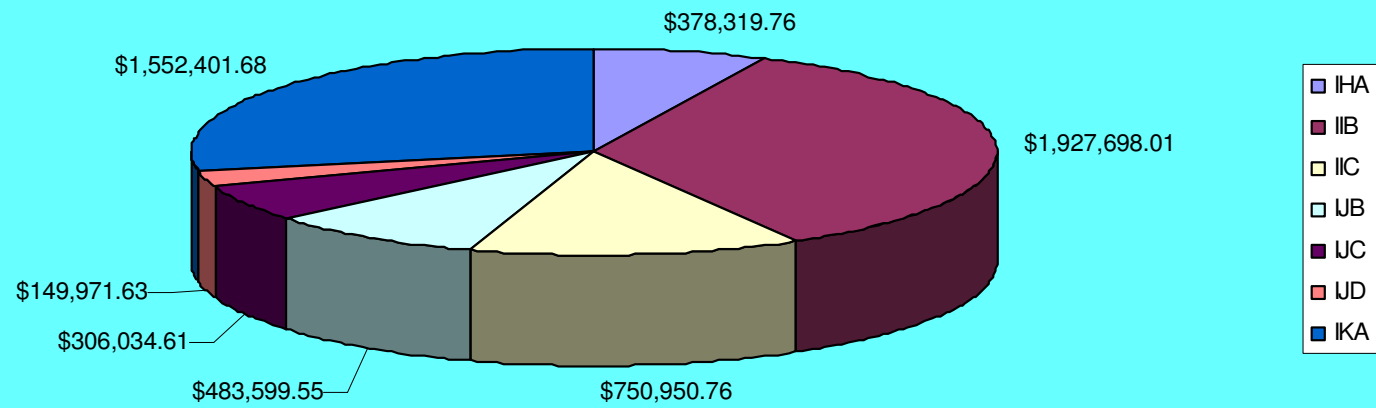


- Web Based Utility Database
- Utility Management – Electric, Gas, Coal, Water/Sewage – to be expanded to renewables, transportation, new and retrofit construction under the LEED program.
- Building Automation Systems
- Four Phase Energy Retrofit Performance Contracting

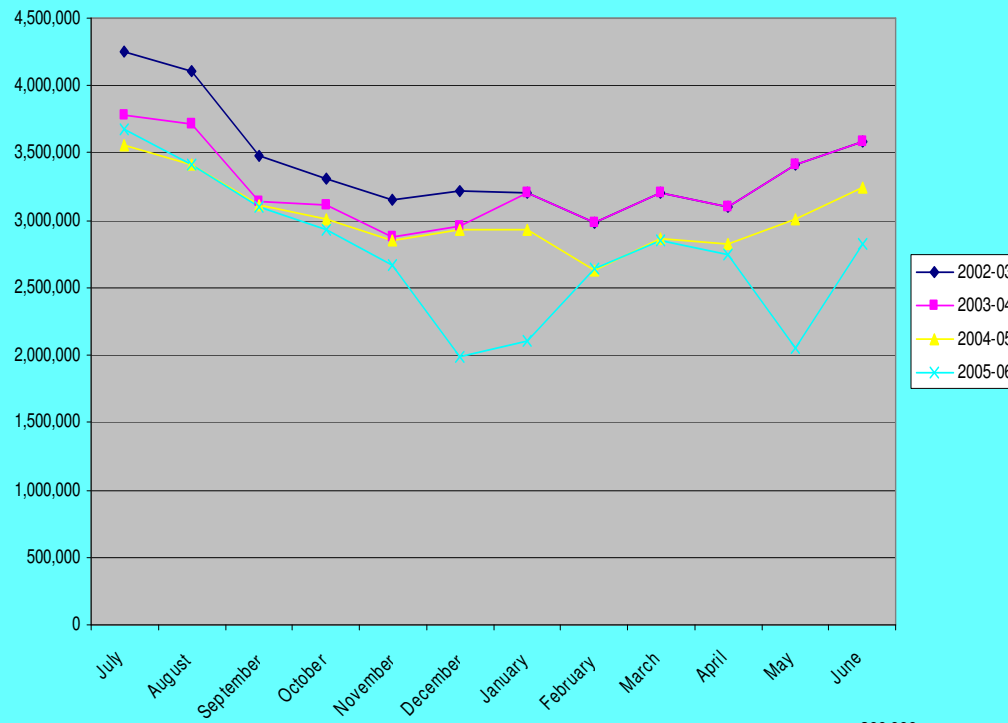
Utility Database Development and Management

- WEB based Energy Database Bill Processing
- Set up accounts
- Populate Database
- Process Utilities
- Develop energy profiles
- Provide reports
- Track Savings and Baselines
- Pay Bills Electronically
- Scanning and bill record keeping

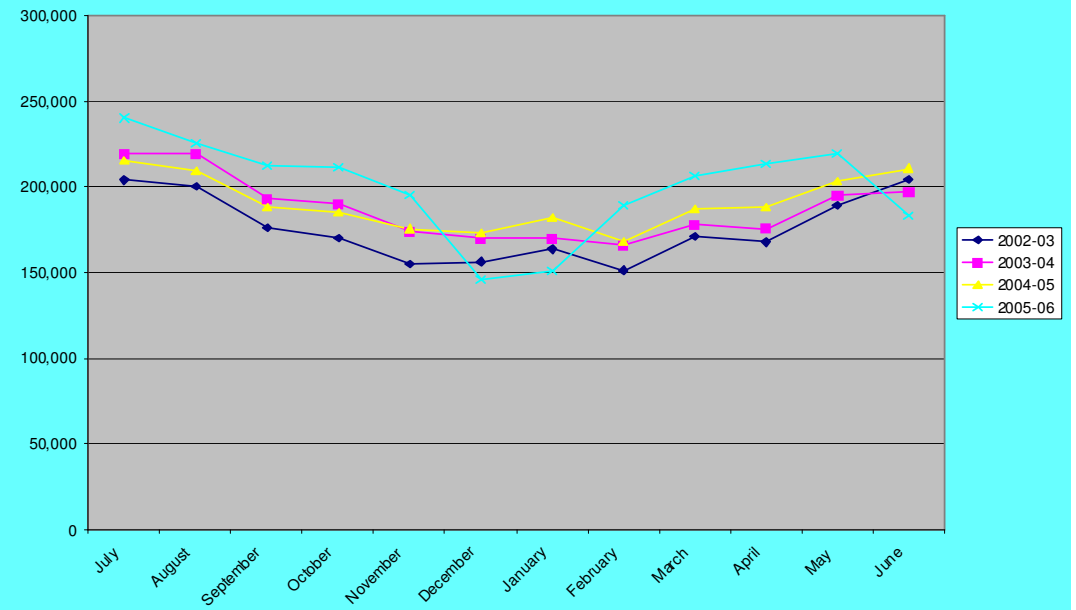
FY05 Utility Cost per Agency



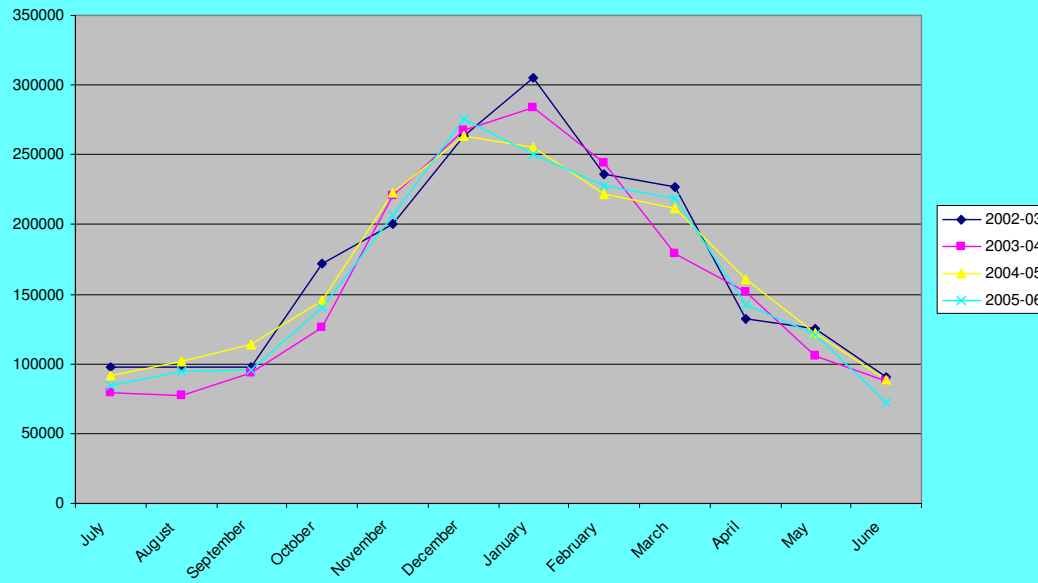
KWH



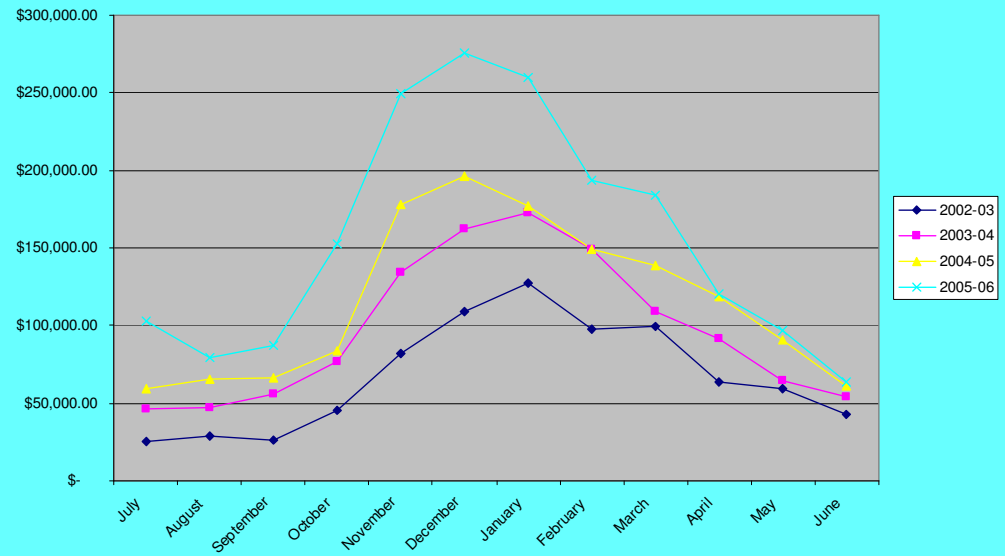
\$ Electric



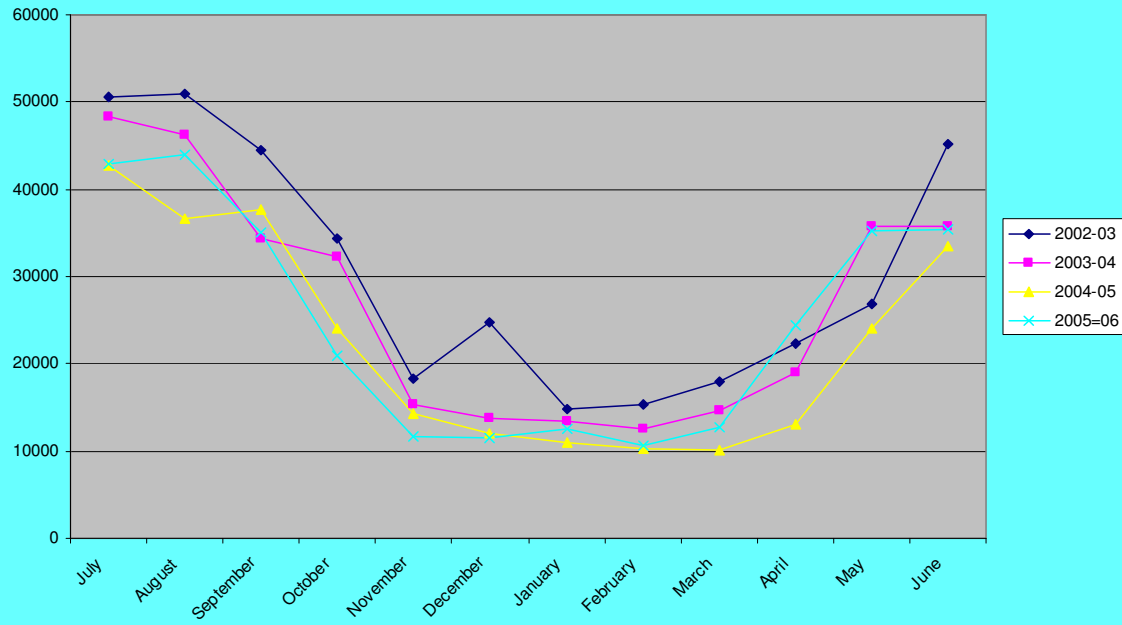
THERMS



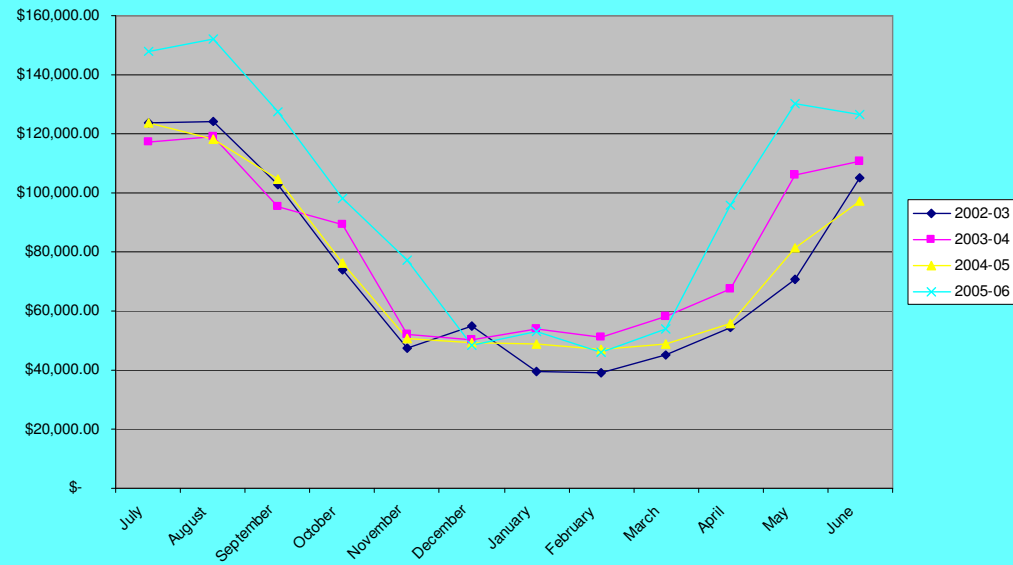
\$ GAS



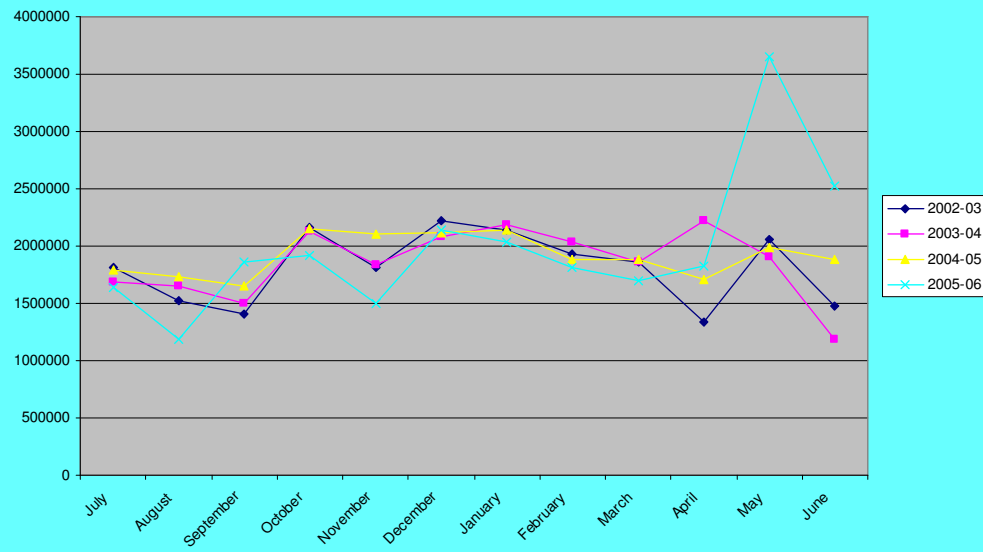
Kgal WATER



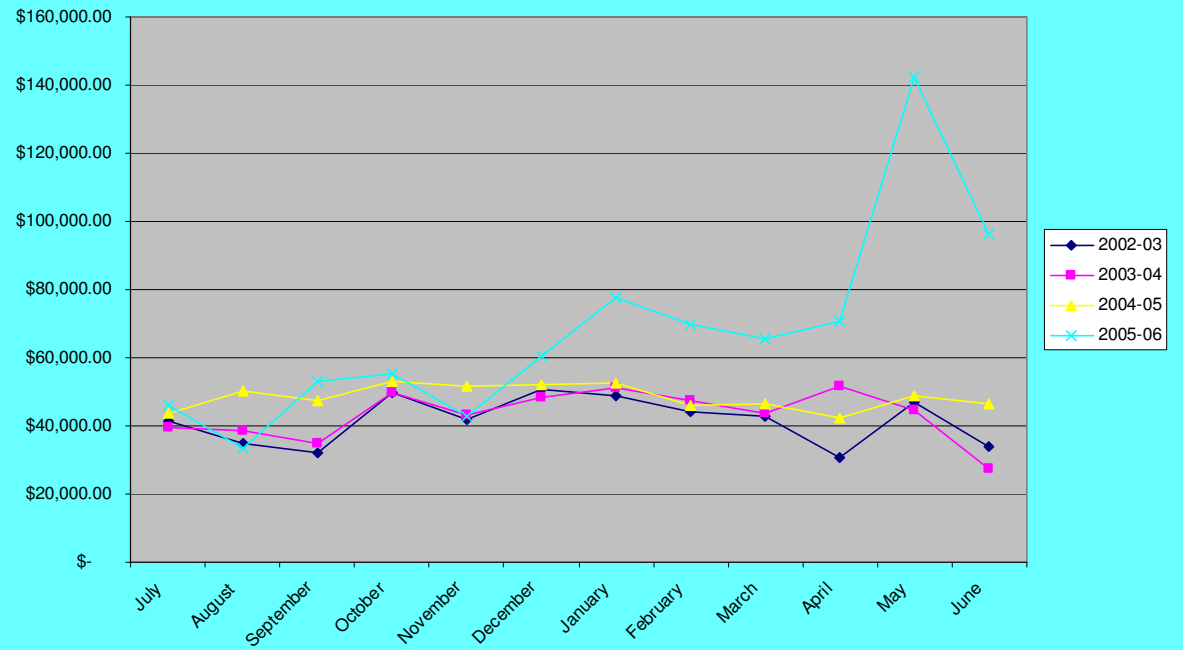
\$ WATER/SEWER



COAL-LBS



\$ COAL



DHS develops and manages transport gas contracts watching the NYMEX and Henry HUB gas futures to determine optimal price locks for all DHS major facilities saving substantial dollars over commercial gas rates.



DHS Utility Management

- Utility Rate Analysis _ Saving \$156,000
- Electric, Gas, Water, Sewage, Irrigation, Waste treatment Savings \$ 45,000
- Utility Negotiations- Water, Gas ,Electric
- DSM - Ratchets – Demand Control
- Transport Gas purchases - \$300,000 per year
- Rebate Programs - \$74,000 (Xcel) , Fed Grants Over \$4,000,000 Phase I Nursing homes.
- Load Shifting. Backup generation, EMS

DHS Building Automation Systems



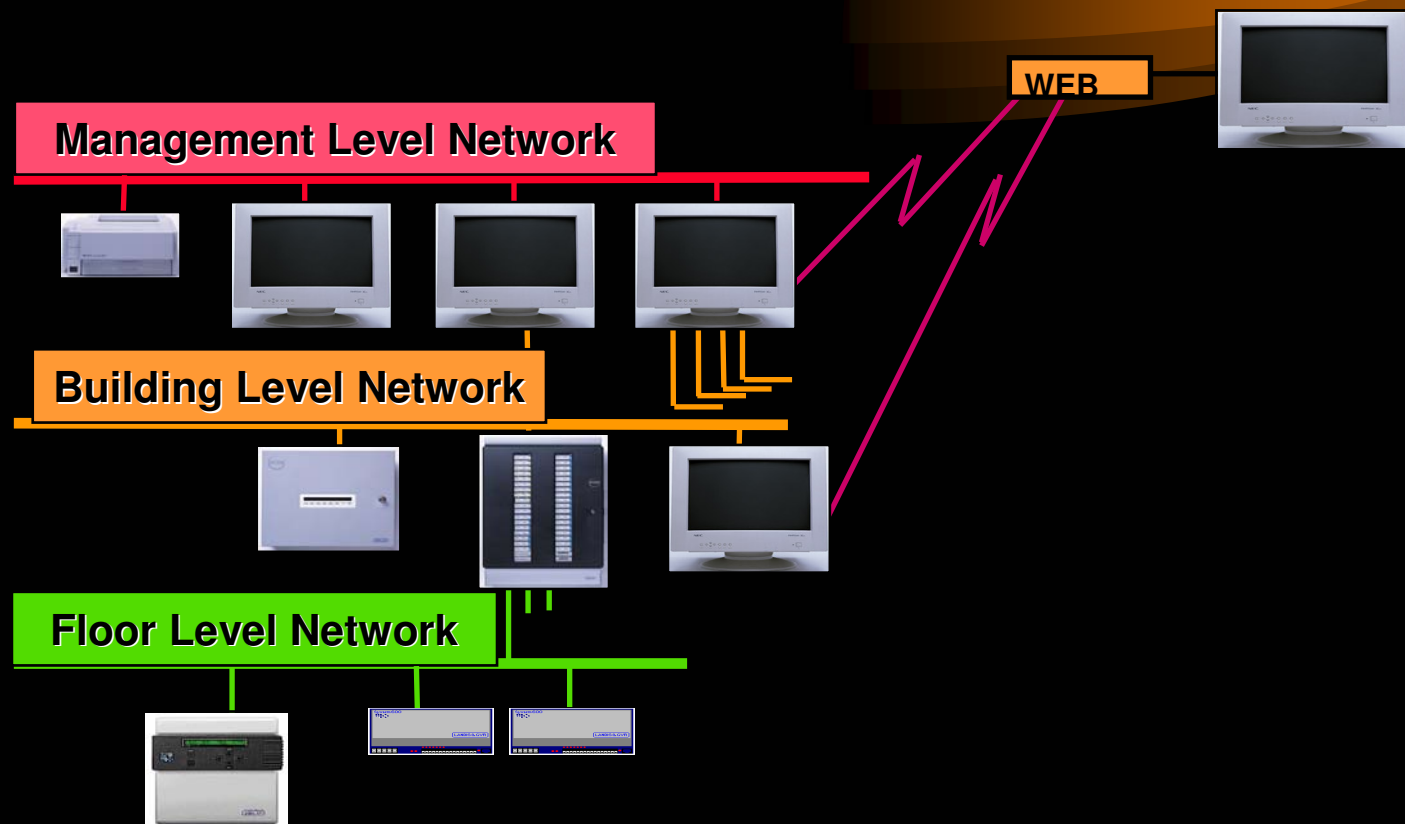
- We specified WEB based BAS
- DHS developed controls standards
- Project management
- Manage Punch Lists
- Coordinate Test and Balance
- Review control programs and graphics
- Review maintenance programs, O&M, training for new and retrofit mechanical systems

DHS Technicians can control and monitor our DHS facilities statewide via our central workstations or laptops via the WEB based Building Automation System

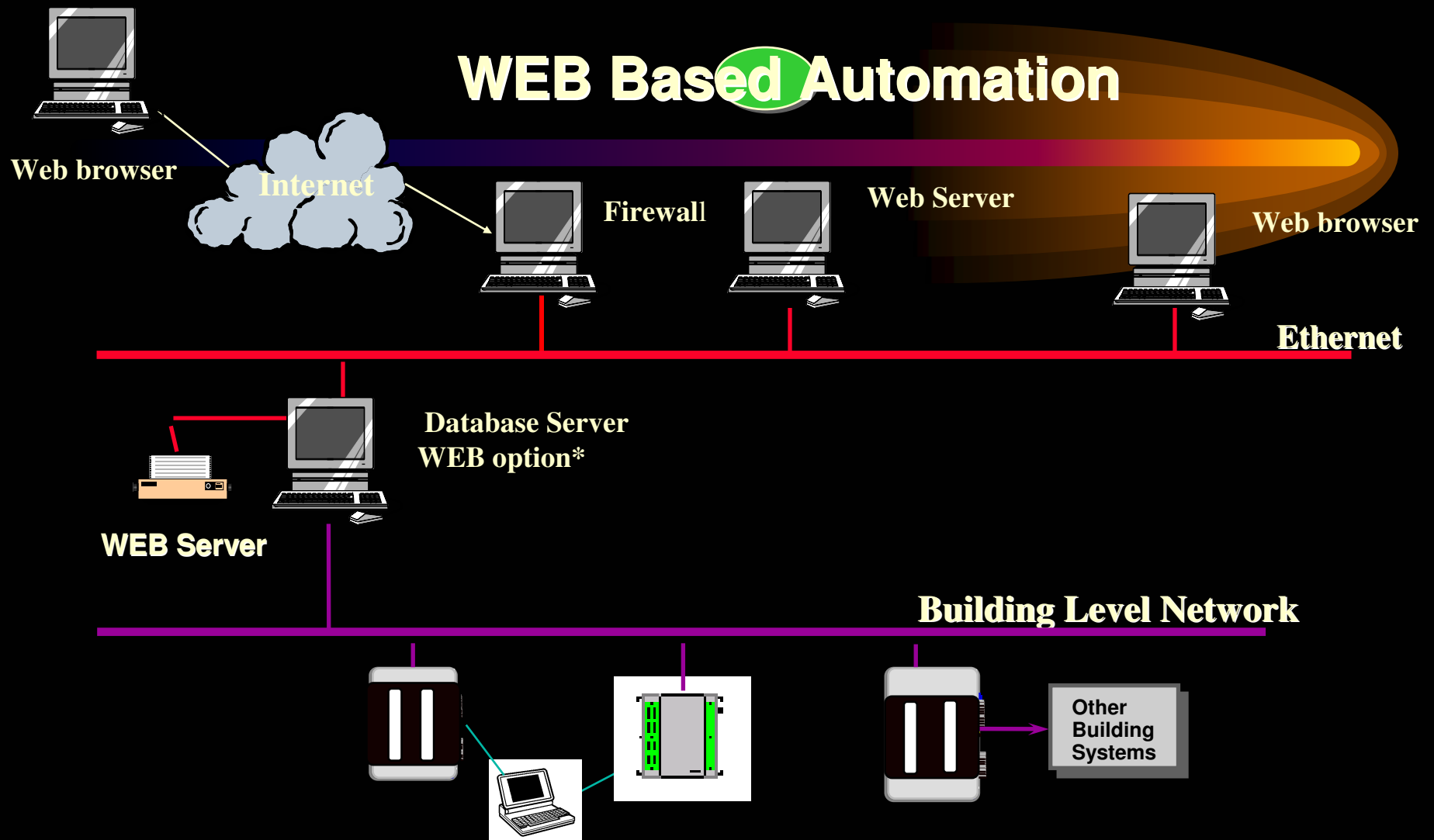
- **Do anything from your PC or Laptop**
- **Universal access & privileges**
- **Scheduler**



DHS project manages and specifies building energy management systems that optimize energy usage and result in lower maintenance costs and reduce response time on equipment failure.

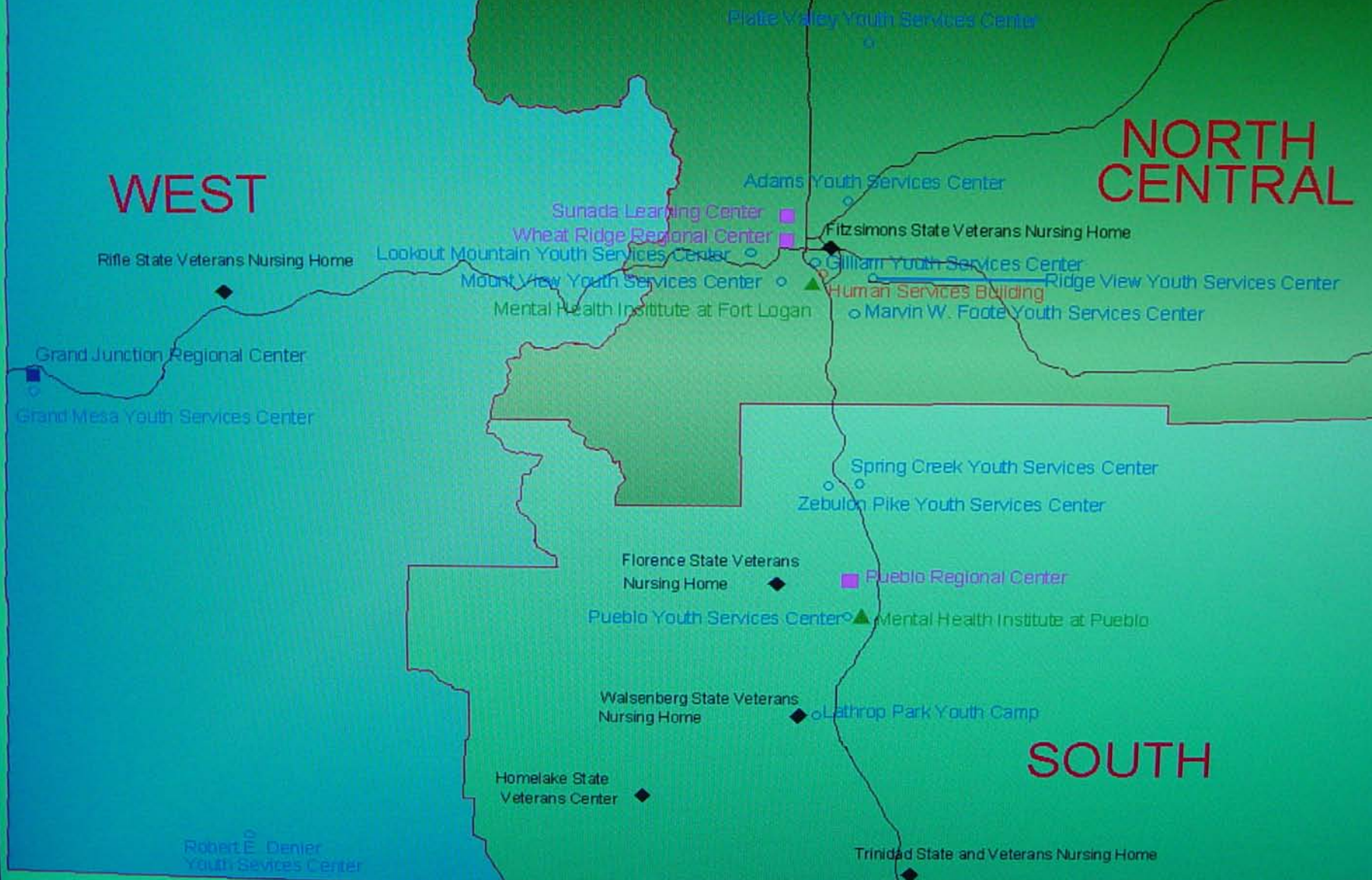


WEB Based Automation



WEST

NORTH
CENTRAL





NFL00H

ABSORBER

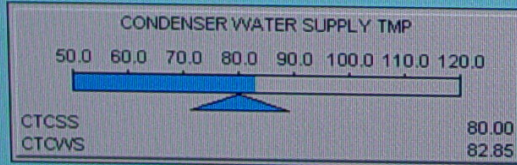
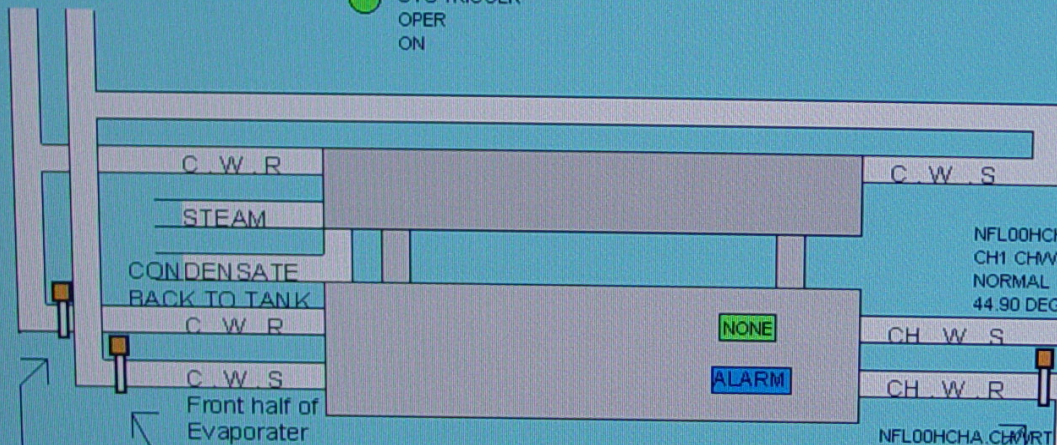
In Basement

STM GEN
5 & 6

TOWER

To Cooling Tower

NFL00HCHA.CH1SY
SYS TRIGGER
OPER
ON



NFL00HCT.CTCWR
TWR RET TMP
NORMAL
82.39 DEG F

NFL00HCHA.CHP12
CH1 PMP12 SS
OFF

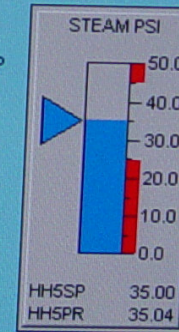
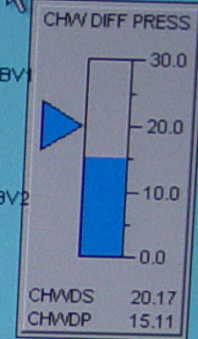
NFL00HCHA.CHP13
CH1 PMP13 SS
ON

NFL00HCHA.CHVST
CH1 CHVS TMP
NORMAL
44.90 DEG F

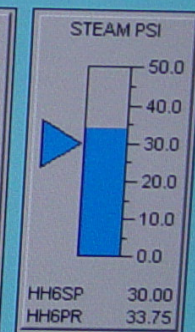
NFL00HCHA.CHVDP
NORMAL

NFL00HCHA.CHV1
CHW BYP VLV
NONE
0.00 PERCENT

NFL00HCHA.CHV2
CHW CTL VLV
NONE
0.00 PERCENT



NFL00H.HH5HC
H5 HT VLV
NONE
5.18 PSI



NFL00H.HH6HC
H6 HT VLV
NONE
1.00 PSI

NFL00HCHA.CH1PR
ABSORB PRES
FAILED
0.00 PSI

SITE

H BLDG

BSMT

1ST
FLOOR

2ND
FLOOR

ROOF

NFL0KE.OATEMP
NORMAL
89.21 DEG F

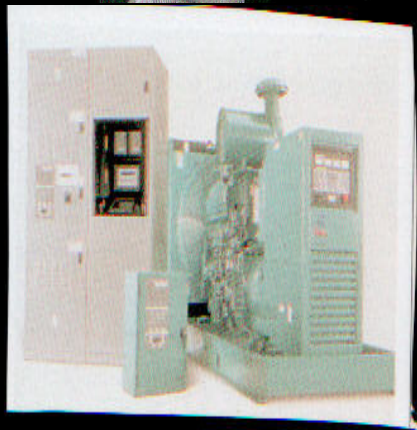
Guaranteed Performance DHS Contracting Services



- Audits and Baseline development
- Guaranteed Retrofit Performance Contract
- Contract Management
- Engineering Management
- Construction Management
- Measurement and Verification
- Baseline tracking

DHS Manages Performance Based Contracts

Millions of dollars of facility improvements have been realized and paid through energy savings. Performance contracting provides DHS with guaranteed savings that are applied to facility improvements without any capital outlay by the State! Think about it, “you can give your money to the utility or use the savings and buy new equipment”. Energy retrofit improvements such as lighting, heating, ventilation, air-conditioning, building automation systems and other facility improvements are currently being implemented throughout the state.





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